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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/755,790

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Thomas Patrick Bishop

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EXAMINER

FERRIS III, FRED O

ART UNIT

PAPER NUMBER

2128

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/755,790

Applicant(s)

BISHOP ET AL.

Examiner

Fred Ferris

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/12, 2/11</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. *Claims 1-35 have been presented for examination based on applicant's disclosure filed 12 January 2004. Claims 1-35 are currently pending in this application and stand rejected by the examiner.*

Drawings

2. *The drawings are objected to as not showing all of the claimed elements. In particular, the instruction for conditioning (e.g. separating data, determining significance, smoothing and filtering, are not disclosed in the drawings.*

MPEP Section 608.02(d) [R-2] "Complete Illustration in Drawings" recites the following:

"37 CFR 1.83. Content of drawing.

(a) The drawing in a nonprovisional application must show every feature of the invention specified in the claims. However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation"

Figure 6 of the drawings is further objected to because it is informal and therefore acceptable for examination purposes only. New formal drawings will be required when claims are allowed.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. ***Claims 1-35 are rejected under 35 U.S.C. 101 because the claimed invention is drawn to non-statutory subject matter.***

Per claims 1-19: The Examiner submits that, in view of the language of the claims, method claims 1, 9, and 16, do not appear to recite a result that is concrete and tangible. In this case the result appears to merely be numerical representation that is an "estimation" of component usage. The examiner submits that in order to establish a practical application, there must be either a physical transformation, or a useful, concrete and tangible result. Data transformation is not the same as a physical transformation. Here, the result of "determining an estimated usage" is simply a mathematical computation resulting in an un-stored and un-applied number, not a physical transformation. "Estimating", in this case, is a thought or computation, and not in and of itself a concrete and tangible result. It is not until the result is applied in a meaningful way that it has real world value and becomes a concrete and tangible result. For example, there does not appear to be a concrete and tangible result that is specifically applied to and stored to achieve the intended method as recited in the preamble of the claim.

MPEP 2106 recites the following:

"A. Identify and Understand Any Practical Application Asserted for the Invention
The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and **tangible result**," State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of **"real world" value**, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35

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U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

Although the courts have yet to define the terms useful, concrete, and tangible in the context of the practical application requirement for purposes of these guidelines, the following examples illustrate claimed inventions that have a practical application because they produce useful, concrete, and tangible result:

- Claims drawn to a long-distance telephone billing process containing mathematical algorithms were held to be directed to patentable subject matter because "the claimed process applies the Boolean principle to produce a useful, concrete, **tangible result** without pre-empting other uses of the mathematical principle." *AT & T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358, 50 USPQ2d 1447, 1452 (Fed. Cir. 1999);

- "[T]ransformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces a useful, concrete and tangible result' -- a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades." *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601; and

- Claims drawn to a rasterizer for converting discrete waveform data samples into anti-aliased pixel illumination intensity data to be displayed on a display means were held to be directed to patentable subject matter since the claims defined "a specific machine to produce a useful, concrete, and **tangible result**." *In re Alappat*, 33 F.3d 1526, 1544, 31 USPQ2d 1545, 1557 (Fed. Cir. 1994).

A process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See *In re Warmerdam*, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). See also *Schrader*, 22 F.3d at 295, 30 USPQ2d at 1459. Office personnel have the burden to establish a prima facie case that the claimed invention as a whole is directed to solely an abstract idea or to manipulation of abstract ideas or does not produce a useful result. Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101. Compare ***Musgrave*, 431 F.2d at 893, 167 USPQ at 289; *In re Foster*, 438 F.2d 1011, 1013, 169 USPQ 99, 101 (CCPA 1971).** Further, when such a rejection is made, Office personnel must expressly state how the language of the claims has been interpreted to support the rejection."

Dependent claims inherit the defects of the claims from which they depend.

Per claims 20-35: The Examiner submits that the claims as written, are merely drawn to a "data processing system" that consists of entirely of nonstatutory descriptive material. (i.e. software per se) In this instance, the claimed instruction for conditioning separating data, determining significance, smoothing and filtering, for example, appear to simply be software components that are not structurally and functionally interrelated

as a computer component. Dependent claims 8, 15, and 19, which depend from method claims 1, 9, and 16 respectively also appear to claim an apparatus consisting only of software program elements.

MPEP 2106 recites the following supporting rational for this reasoning:

"Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data. Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized."

Dependent claims inherit the defect of the claims from which they depend.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over "A Capacity Planning Methodology for Distributed E-Commerce Applications", S.D. Kounev, Ver.

0.1/01.02.2001, 2001

Kounev anticipates and/or renders obvious the claimed limitations of the present invention as follows:

Per independent claims 1, 9, 16, 20, 27 and 33: method, system and instructions for estimating component usage in application environment: (Section 6.1-6.5, Figs. 1, 3)

- conditioning data (by subsets) regarding workload and utilization of component;

(Sections 6.1-6.7) Note: Subsets are anticipated by the functionally equivalent "workload class" of Kounev. (See: Section 6.7)

- determining estimated usage (by subsets) of component for a transaction type (Section 6.1-6.5, Tab. 1)

- determining estimated usage (test, subsets) is performed during or after conditioning data. (Sections 6.7-8.0)

In the alternative, claims 1, 9, 16, 20, 27, and 33 are obvious in view of Kounev since a skilled artisan would have known to separate the data into subsets as a method of categorization by similar characteristics. (See: "subset" High-Tech dictionary) Conditioning the data would have further been obvious as a method of improving the data for processing. (See: "conditioning", Microsoft Computer Dictionary, 1997) Hence a skilled artisan having access to the teachings of Kounev would have knowingly implemented subset and conditioning features motivated as noted above.

Per claims 2, 7, 12, 21, 26, and 30: separating data into sub-sets, determining averaged estimated usage, significance test, determining estimated usage: Subsets are anticipated by the functionally equivalent "workload class" of Kounev. (See: Section 6.7)

("testing" significance, Sections 6.5-6.7, "averaged usage" Section 6.5)

Per claims 3, 6, 10, 11, 22, 28 and 29: conditioning includes one or more of: *smoothing the data; filtering the data; and determining accuracy for estimated usage: ()* data “smoothing” and “filtering” are well-known techniques for eliminating irregularities in statistical data and weeding out data of interest respectively, and therefore would have knowingly been implemented by a skilled artisan motivated as noted. (See: “smoothing”, “filtering”, Microsoft Computer Dictionary, 1997)

Per claims 4, 5, 13, 14, 17, 18, 23, 24, 31, 32, 34, 35: data is asynchronous, estimated usage uses regression. A skilled artisan would have knowingly incorporated well-known regression analysis as a method of determining the degree to which variations in data affect dependent data. (See: “regression analysis”, Microsoft Computer Dictionary, 1997) The data involved in estimation would obviously by necessity be asynchronous since there is no synchronization between workload model of Kounev, for example, and the application environment. (See: Kounev, Section 6, Fig. 3)

Per claim 25: claim 25 merely recites a combination of the same limitations addressed above and is rejected using the same reasoning.

Per claims 8, 15, and 19: apparatus estimating usage in application environment (Section 6.1-6.5, Figs. 1, 3).

Conclusion

5. *The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, careful consideration should be given prior to applicant's response to this Office Action.*

US Patent 6,944,660 issued to Eshghi et al teaches estimating workload in a application environment.

US Patent 5,367,473 issued to Chu et al teaches estimating workload in a application environment.

Capacity and Performance of Distributed Enterprise Systems, Aries et al, Communications of the ACM, Vol. 45, No. 6, June 2002 teaches simulation and estimating workload in a application environment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 571-272-3778 and whose normal working hours are 8:30am to 5:00pm Monday to Friday. Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 571-272-3700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached at 571-272-2279. The Official Fax Number is: (571) 273 8300

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